CIHR IRSC
Instituts de recherche en santé du Canada

Spring 2006

Your Health Research Dollars at Work

An Update from the Canadian Institutes of Health Research

President's Message

Biotechnology and health innovation are key to the Canadian economy. CIHR has several roles to play in transforming knowledge into innovative products and services.

CIHR funding, for instance, helped build Neuromed Pharmaceuticals Ltd., which recently signed a licensing deal with Merck & Co., Inc. worth potentially US$475 million for its experimental drugs for chronic pain.

CIHR has programs to catalyze innovation. Funding from the Proof of Principle (POP) program helps bridge the growing gap between discoveries and early-stage investors. POP recipient Amorfix Life Sciences Ltd. is developing ways to diagnose variant Creutzfeldt-Jakob disease. The company hopes the same technology can be applied for early detection of Alzheimer's disease.

CIHR also funds training projects necessary for health innovation. The Science to Business (S²B) program, in partnership with Canada's business schools, provides support for PhD graduates in the life sciences to enrol in health-oriented MBA programs.

Finally, CIHR's support for innovation extends beyond commercialization to translate knowledge into action in the health system. To help address the critical issue of timely access to quality care, CIHR, in partnership with the provinces and territories, funded wait times research in the areas of cancer, joint replacement and sight restoration. The results of this research played a critical role in the subsequent announcement of wait times benchmarks and, indeed, will continue to figure heavily in the Government of Canada's plan for a healthcare guarantee.

As Minister Clement said in Parliament in his reply to the Speech from the Throne, "The Government is committed to the importance of research and is committed to applying the clinical results into a health care plan of action that will improve the lives of all Canadians."

Dr. Alan Bernstein, O.C., FRSC
President, Canadian Institutes of Health Research

CIHR-FUNDED RESEARCH

Neuromed Strikes Major R&D Deal with Merck

The science behind Neuromed's new drug began with CIHR-supported research led by Dr. Terry Snutch.

CIHR-supported research that began 14 years ago has culminated in the largest licensing deal in Canada's biotech history.

Neuromed Pharmaceuticals Ltd., a spin-off of the University of British Columbia (UBC), signed an R&D collaboration and licensing agreement in March with Merck & Co., Inc., worth up to US$475 million. The deal will allow Neuromed's researchers, under the direction of CIHR-funded researcher Dr. Terry Snutch, to further develop NMED-160 into an effective drug for chronic pain sufferers.

The science behind the drug began 14 years ago with Dr. Snutch's CIHR-funded studies of the role of calcium channel blockers to treat chronic pain and other neurological disorders. He was the first scientist in the world to describe the molecular basis for clinically important calcium channels in the cardiovascular, endocrine and nervous systems.

In 1995, Dr. Snutch founded Neuromed. Today, he is both Vice-President and Chief Scientific Officer at Neuromed and a professor in the Michael Smith Laboratories at UBC.

According to Dr. Snutch, the deal with Merck is proof that the academic research he began with CIHR funding can be transformed into products in the public domain and deals that reach into the hundreds of millions of dollars.

NMED-160 is currently in Phase II trials and could be on the market by 2011.

About the Canadian Institutes of Health Research

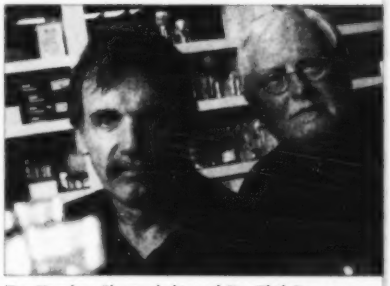
The Canadian Institutes of Health Research is the Government of Canada's agency for health research. Its objective is to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian healthcare system. Composed of 13 Institutes, CIHR provides leadership and support to close to 10,000 researchers and trainees in every province of Canada.

Canada

CIHR IRSC
Instituts de recherche en santé du Canada

FROM LAB TO MARKET

New Cancer Therapies Show Promise



Dr. Gordon Shore (left) and Dr. Phil Branton

Montreal: Gemin X Biotechnologies, a spinoff of McGill University, has demonstrated the efficacy of its potential new drug candidate, GX15-070, in studies using cells taken from blood cancer patients. Results of a preclinical study have shown the drug to have potential for the treatment of mantle cell lymphoma, a type of blood cancer. Gemin X was founded by Dr. Phil Branton, Scientific Director of the CIHR's Institute of Cancer Research.

Blood Test for Alzheimer's Closer to Market

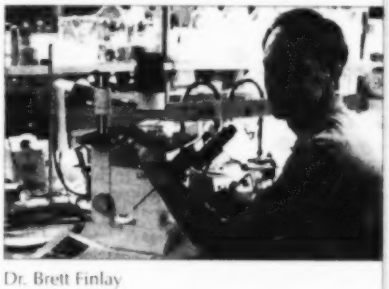
Toronto: CIHR spinoff Amorfix Life Sciences Ltd., based in Toronto, has raised $3.45 million through Blackmont Capital Inc. to advance the company's blood diagnostic program and its Amyotrophic Lateral Sclerosis (ALS) program. The company is making major strides in the development of blood tests to detect Creutzfeldt-Jakob disease, BSE and Alzheimer's disease using its proprietary Epitope Protection platform. Amorfix was founded with a grant from the CIHR Proof of Principle program to commercialize the discoveries of CIHR-supported Drs. Neil Cashman and Marty Lehto (University of Toronto).

Xenon Targets Human Genetic Diseases

Vancouver: Xenon Pharmaceuticals Inc., a world-leading clinical genetics-based drug development company, raised US$31 million in private financing in April. "This financing will support Xenon's next phase of growth as we advance our novel therapeutics into clinical development," said Dr. Simon Pimstone, Xenon's President and CEO. Xenon is a spinoff company of Dr. Michael Hayden from the University of British Columbia. Today, the company is Canada's largest privately held biotech company. Its annual payroll is about 10 times CIHR's total investment in the original research that led to its founding.

U.S. Regulators Review Canadian *E. coli* Vaccine

Belleville: Bioniche Life Sciences Inc. is seeking approval from the U.S. Department of Agriculture for a new *E. coli* O157:H7 cattle vaccine developed with CIHR support. Dr. Brett Finlay, a CIHR Distinguished Investigator from the University of British Columbia, together with Dr. Andy Potter from the University of Saskatchewan, developed the vaccine against *E. coli* O157:H7, the bacterium responsible for the Walkerton water crisis in 2000.



Dr. Brett Finlay

CANCER

Colon Cancer Discovery Could Save Lives

Montreal: Dr. Jeremy Jass, a CIHR-funded researcher from McGill University, has identified a type of colon cancer that is hereditary. In 11 of hundreds of families tested, he discovered disease patterns on polyps that do not fit with the known inherited conditions: familial adenomatous polyposis and hereditary non-polyposis colon cancer. The discovery will help in early diagnosis and treatment of patients at risk.

Improving Treatment for Prostate Cancer

Toronto: Dr. Shabbir Alibhai, a CIHR-supported researcher from the University Health Network and University of Toronto, has shown that many men over age 65 benefit from surgery and radiation treatment for prostate cancer. Previous studies have shown that older patients often do not receive this potentially life-prolonging treatment.

CIHR Funds Tumour Bank

Winnipeg: A Canadian tissue bank with more than 7,000 cancer tumour samples is being made available to researchers around the world in what scientists are hailing as a major step forward in cancer research. The samples, acquired through collection programs in five provinces, are expected to contribute to dramatic advances in the search for more effective cancer treatments, said Peter Geary, director and CEO of the CIHR-funded Canadian Tumour Repository Network, based in Winnipeg.

New Cancer Drug Found to be Safe

Vancouver: A clinical trial conducted by Dr. Kishor Wasan, a CIHR University-Industry Research Chair at the University of British Columbia, found that a recently approved breast cancer prevention treatment does not increase the risk of cardio-vascular disease. Letrozole was recently approved by Health Canada for use by post-menopausal survivors of early-stage breast cancer who have completed five years of tamoxifen therapy.

Brain Cancer Breakthrough

Calgary: A University of Calgary researcher has found a new treatment that is extending survival time for patients with brain tumours. Working with researchers in Europe, CIHR-supported Dr. Greg Cairncross discovered that the drug temozolomide may prolong the lives of some people with the most common and deadliest type of brain tumour, glioblastomas.

CIHR IRSC
Instituts de recherche en santé du Canada

IMPROVING HEALTHCARE

Health Research Helping to Solve Wait Times Issues

National: On April 20, Health Minister Tony Clement and CIHR President Dr. Alan Bernstein announced more than $273 million in funding for research projects, many of which will, in the words of Minister Clement, "give us the evidence we need to help solve the wait times issues we confront and help us ensure our health-care system operates effectively and efficiently." The 793 projects funded across Canada, including one on the power of music to help people with Parkinson's disease, underwent a rigorous peer review process before being approved. Award-winning country singer, Paul Brandt, performed a song he wrote especially for this event and talked about the impact of Parkinson's disease on his family and the need for innovative research and treatment.

Dr. Alan Bernstein (left), country singer Paul Brandt, and Health Minister Tony Clement at the CIHR national funding announcement in Calgary. Mr. Brandt's father-in-law has Parkinson's Disease.

Strengthening Health Services Research

Atlantic Canada: The Atlantic Regional Training Centre (ARTC) has received renewed funding for an innovative program that is building a critical mass of health service researchers in Atlantic Canada. The ARTC offers a Master's degree in Applied Health Services Research that is the first of its kind in Canada. "Our healthcare system needs local researchers to study cost-effective and efficient methods of healthcare delivery," said Dr. Vianne Timmons, a Principal Investigator of the ARTC. The renewed funding was based on the results of a review by the Canadian Health Services Research Foundation and CIHR that described the program as "a model of inter-provincial collaboration".

Overcoming Barriers to Alzheimer's Care in Rural Areas

Saskatoon: A University of Saskatchewan researcher has been working with rural and remote communities and care providers to help people with Alzheimer's disease access home care and support groups. CIHR-funded Dr. Debra Morgan identified eight barriers to the use of formal services in rural and remote areas, including the stigma of dementia, lack of privacy and anonymity, lack of awareness and lack of access to services because of distance.

Dr. Morgan and her team at the U of S

Overcrowded ERs: Reducing Barriers to Effective Treatment

National: Overcrowding in the emergency room may be why fewer than half of all heart attack victims receive potentially life-saving drugs within the recommended 30 minutes of arrival, according to research by CIHR-funded Dr. Jack Tu and the Canadian Cardiovascular Outcomes Research Team. Better organization of emergency rooms, routine monitoring of treatment times and a triage system that deals with chest pain patients immediately could help to reach the 30-minute treatment goal.

MENTAL HEALTH

SSRIs Increase Risk of Suicide

Ottawa: CIHR-funded researcher Dr. Dean Fergusson and his team at the Ottawa Health Research Institute (University of Ottawa) found that people who take certain antidepressants – including Prozac, Paxil and Zoloft – are at a two-fold increased risk of attempting suicide. The findings are based on an exhaustive review of 712 published randomized controlled trials of selective serotonin reuptake inhibitors (SSRIs), involving 87,650 patients. The project provides important information that will allow physicians and patients to make more informed decisions about the benefits and risks of SSRIs.

Seniors Over-prescribed Antipsychotic Drugs

Toronto: Dr. Paula Rochon, a CIHR-funded researcher at the Institute for Clinical Evaluative Sciences in Toronto, has determined that seniors are prescribed too many antipsychotic drugs once they move into long-term care facilities. This practice has been associated with instability and falls, Parkinson-type symptoms and an increased risk of stroke.

CIHR IRSC
Institute de recherche en santé du Canada

HEALTHY CHILDREN

A First in Pediatric Cardiology

Montreal: CIHR is providing $10 million to support a major study into the genetic determinants of congenital heart disease, the leading cause of death in Quebec children under the age of one. "The study results will help health professionals target medical therapies and prevent infant congenital heart disease. It will also allow us to work on problems before they occur, rather than simply repairing defective plumbing," said Dr. Gregor Andelfinger, one of the project's main researchers. This five-year multidisciplinary project is coordinated by the CHU Sainte-Justine Hospital in Montreal.

Can Divorce Contribute to Childhood Obesity?

Katerina Maximova

Montreal: CIHR Doctoral Research Award recipient Katerina Maximova from McGill University is conducting research to help us understand how the social environment affects obesity among Canadian children and the ways this environment can be altered. The study is evaluating whether the risk of obesity increases when children undergo changes in family income, mother's work status, parenting practice, and suffer from behaviour problems as a result of their parents' divorce.

CIHR's *Your Health Research Dollars at Work* is available to Members of Parliament, Senators and policy-makers to communicate the benefits of the Government of Canada's investment in health research. News items can be reproduced for use in householders and other communications materials. Visit CIHR's website to download this issue in electronic form: **www.cihr-irsc.gc.ca**.

CIHR also produces an information kit called *Health Research: Investing in Canada's Future*, that provides a snapshot of the research results that are making a difference to the health of Canadians, to our healthcare system and to our economy. If you would like a copy, please contact Caroline Kay, CIHR's Production Coordinator at **ckay@cihr-irsc.gc.ca**.

Canadian Institutes of Health Research
160 Elgin Street, 9th Floor
Ottawa, ON K1A 0W9
Canada

Tel.: (613) 941-2672
Toll Free: 1-888-603-4178
Fax: (613) 954-1800

www.cihr-irsc.gc.ca

ABORIGINAL CANADIANS

Improving Food Security in the North

Nunavut: A communal harvest and freezer program supported by Inuit leaders and the Nunavut government could become a model for improving food security and fighting chronic diseases across the North. A CIHR study lead by Dr. Laurie Hing Man Chan at McGill University is evaluating the effectiveness of the program in Cape Dorset, including barriers to establishing such a program, its impact on household food supplies and the nutritional status of the community. Rapid changes in traditional lifestyles and diet can increase the risk of chronic diseases such as diabetes among indigenous populations.

Ensuring Equal Care for Rural African and Aboriginal Canadians

Nova Scotia: CIHR-funded researchers with the Department of Nursing at St. Francis Xavier University in Antigonish, Nova Scotia, are studying the inequalities in the health status of African Canadians and Aboriginal Canadians. The team is evaluating current research to identify the nature and scope of these inequities, particularly in rural areas. The research will prove important for improving access to health services for African Canadians and Aboriginal people.

Upcoming Events

Late June: Release of the independent five-year evaluation of CIHR by an International Review Panel

August 13-18: CIHR and other federal government departments will participate in AIDS 2006 (the XVI International AIDS Conference) in Toronto

Fall 2006: National launch of the new CIHR Youth Outreach program

synapse